OIPE IAP28
JUN 19 2006
PATENT & TRADEMARK OFFICE



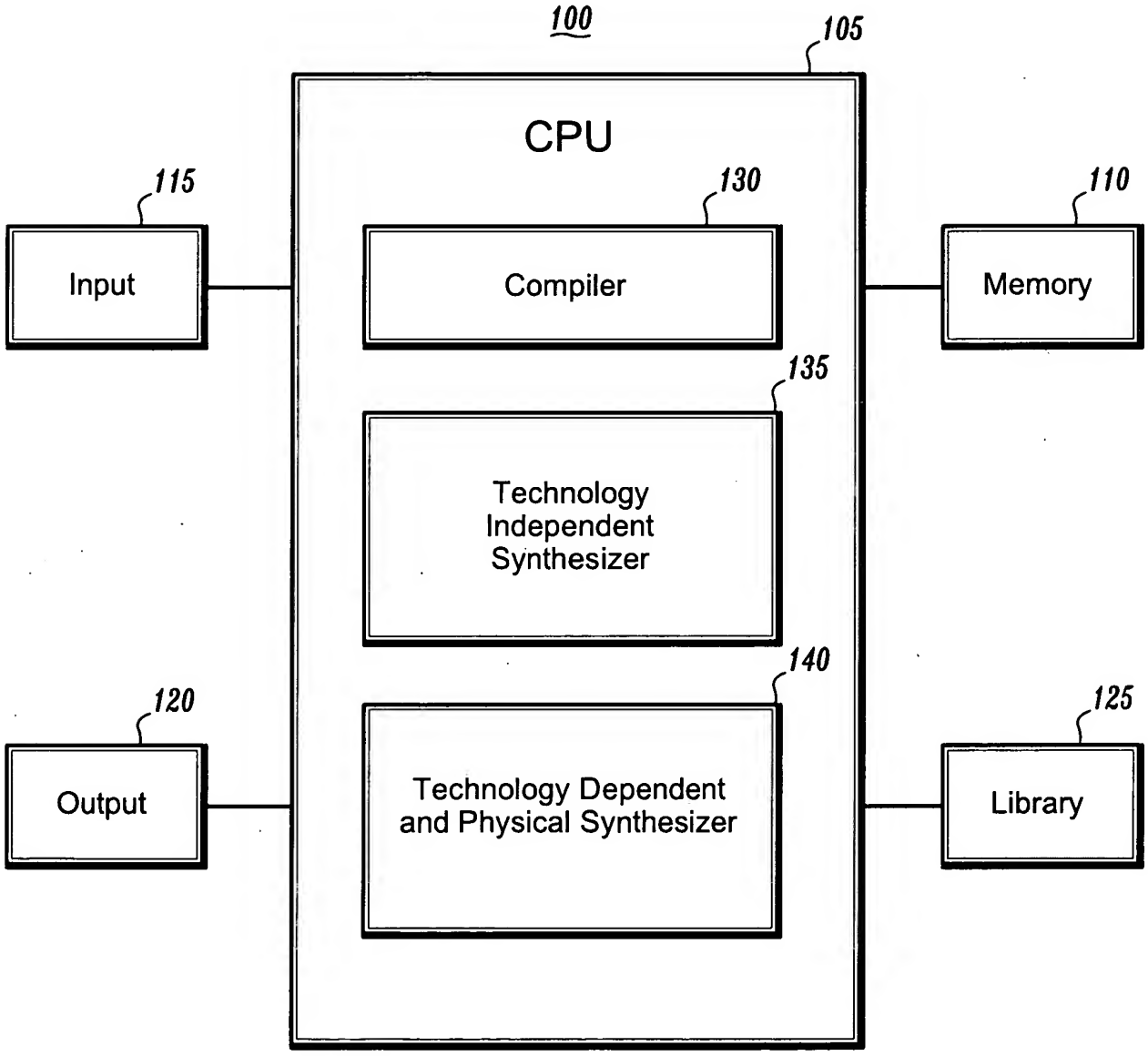


FIG. 1

200

| TYPE 210 | Gds 220 | Leak/µm 230 |
|---|---|---|
| P-gate | 011 | 1.54 |
| P-gate | 101 | 0.11 |
| P-gate | 110 | 0.11 |
| P-gate | 100 | 0.24 |
| P-gate | 10L | 0.20 |
| P-gate | 1L0 | 0.20 |
| P-gate | 1LL | 0.15 |
| P-gate | 1L1 | 0.10 |
| P-gate | 11L | 0.10 |
| P-gate | 111 | 0.00 |
| P-srcdrn | 101 | 4.59 |
| P-srcdrn | 110 | 4.59 |
| P-srcdrn | 1L1 | 2.77 |
| P-srcdrn | 11L | 2.77 |
| P-srcdrn | 111 | 0.00 |
| P-srcdrn | 0L0 | 0.00 |
| P-srcdrn | 00L | 0.00 |
| P-srcdrn | 0LL | 0.00 |
| P-srcdrn | 011 | 0.00 |
| N-gate | 001 | 0.11 |
| N-gate | 010 | 0.11 |
| N-gate | 011 | 0.24 |
| N-gate | 100 | 1.54 |
| N-gate | 00H | 0.10 |
| N-gate | 0H0 | 0.10 |
| N-gate | 01H | 0.20 |
| N-gate | 0H1 | 0.20 |
| N-gate | 0HH | 0.15 |
| N-gate | 11H | 0.00 |
| N-gate | 1H1 | 0.00 |
| N-gate | 1HH | 0.00 |
| N-srcdrn | 001 | 2.68 |
| N-srcdrn | 010 | 2.68 |
| N-srcdrn | 00H | 1.06 |
| N-srcdrn | 0H0 | 1.06 |
| N-srcdrn | 100 | 0.00 |
| N-srcdrn | 1H1 | 0.00 |
| N-srcdrn | 11H | 0.00 |

FIG. 2

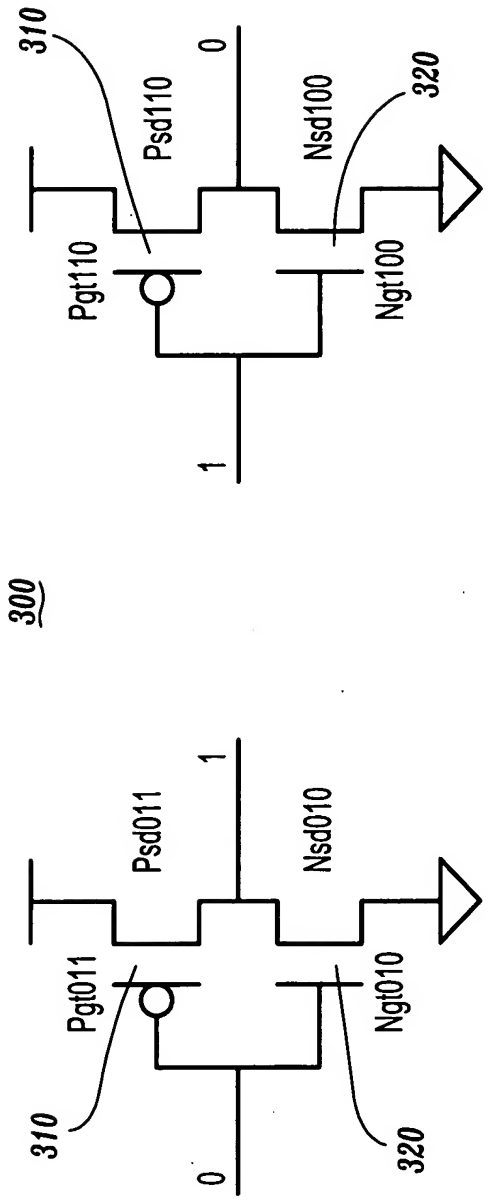
300
310
Psd110
0
Nsd100
320
Pgt110
Ngt100
1
Psd011
1
Nsd010
Pgt011
Ngt010
310
0
320

FIG. 3

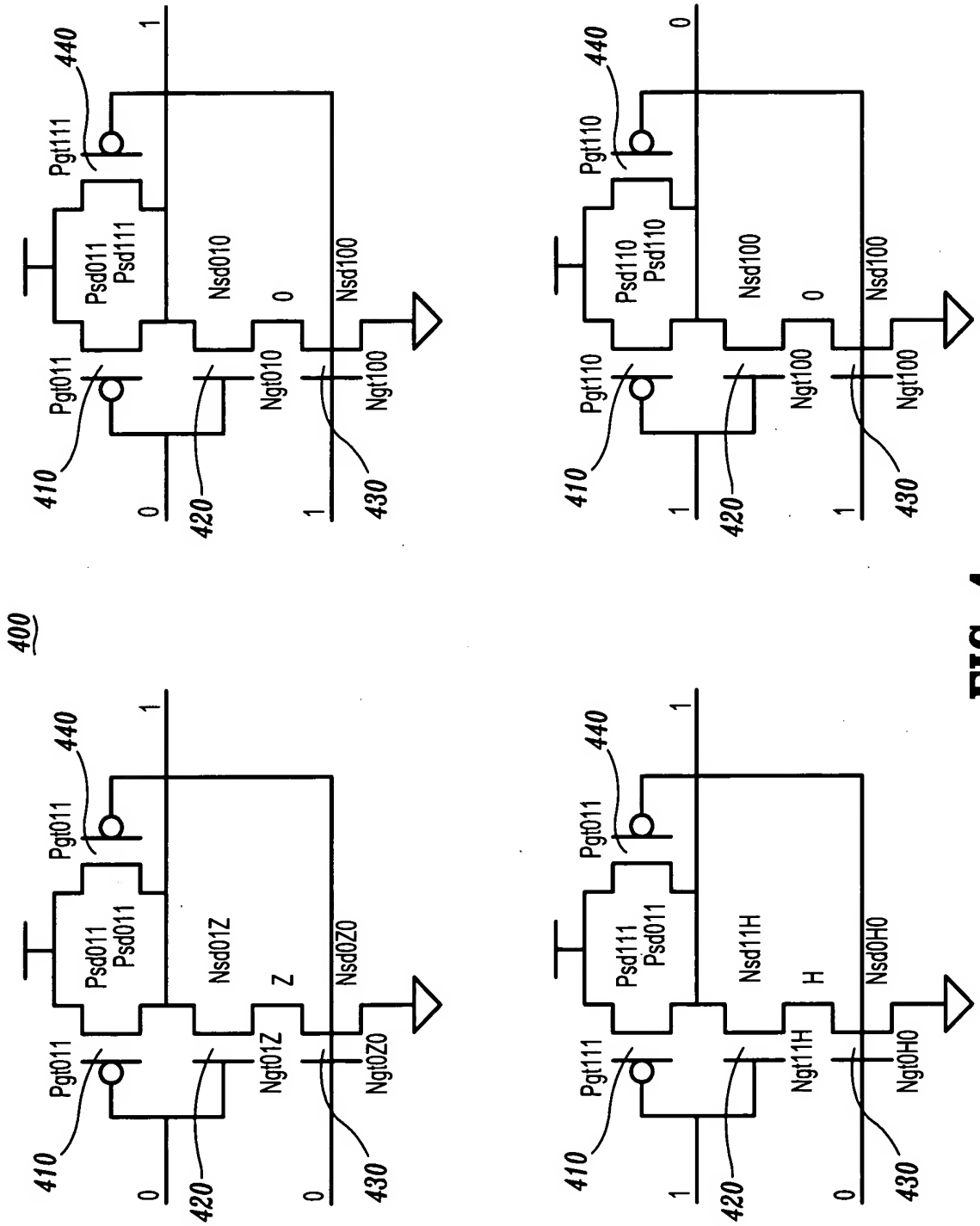
400
410
420
430
440
Pgt011
Psd011
Psd111
Nsd010
Ngt010
Nsd100
Ngt100
Pgt111
Pgt110
Psd110
Nsd100
Ngt100
Pgt011
Psd011
Psd011
Nsd01Z
Ngt01Z
NsdOZO
NgtOZO
Pgt011
Psd111
Psd011
Nsd11H
Ngt11H
NsdOHO
NgtOHO
0
1
Z
H

FIG. 4

500

| Topology 510 | pfet 520 | nfet 530 |
|---|---|---|
| inverter | 3.12 | 2.16 |
| nand2 | 1.94 | 1.09 |
| nand3 | 1.36 | 0.68 |
| nand4 | 1.06 | 0.48 |
| nor2 | 1.54 | 1.47 |
| nor3 | 0.90 | 1.12 |
| aoi21 | 1.29 | 1.15 |
| oai21 | 1.49 | 0.92 |
| aoi22 | 1.39 | 1.05 |
| oai22 | 1.35 | 1.06 |
| xor2 | 1.62 | 1.26 |
| xnor2 | 1.90 | 1.16 |

FIG. 5

600

| Macro 610 | AREA 620 | Leak 630 | Area 640 | Slack 650 |
|---|---|---|---|---|
| idcdsuc | 6265 | -4.94 | -0.79 | 1ps |
| ioexcpt | 6488 | -4.77 | 2.74 | 0ps |
| idagilk | 12967 | -12.49 | -2.45 | -4ps |
| ifctl2 | 29552 | -5.30 | 0.51 | 26ps |
| ifctl1 | 29873 | -2.21 | 1.11 | 3ps |
| idecode | 67878 | -4.29 | 0.78 | -16ps |

FIG. 6

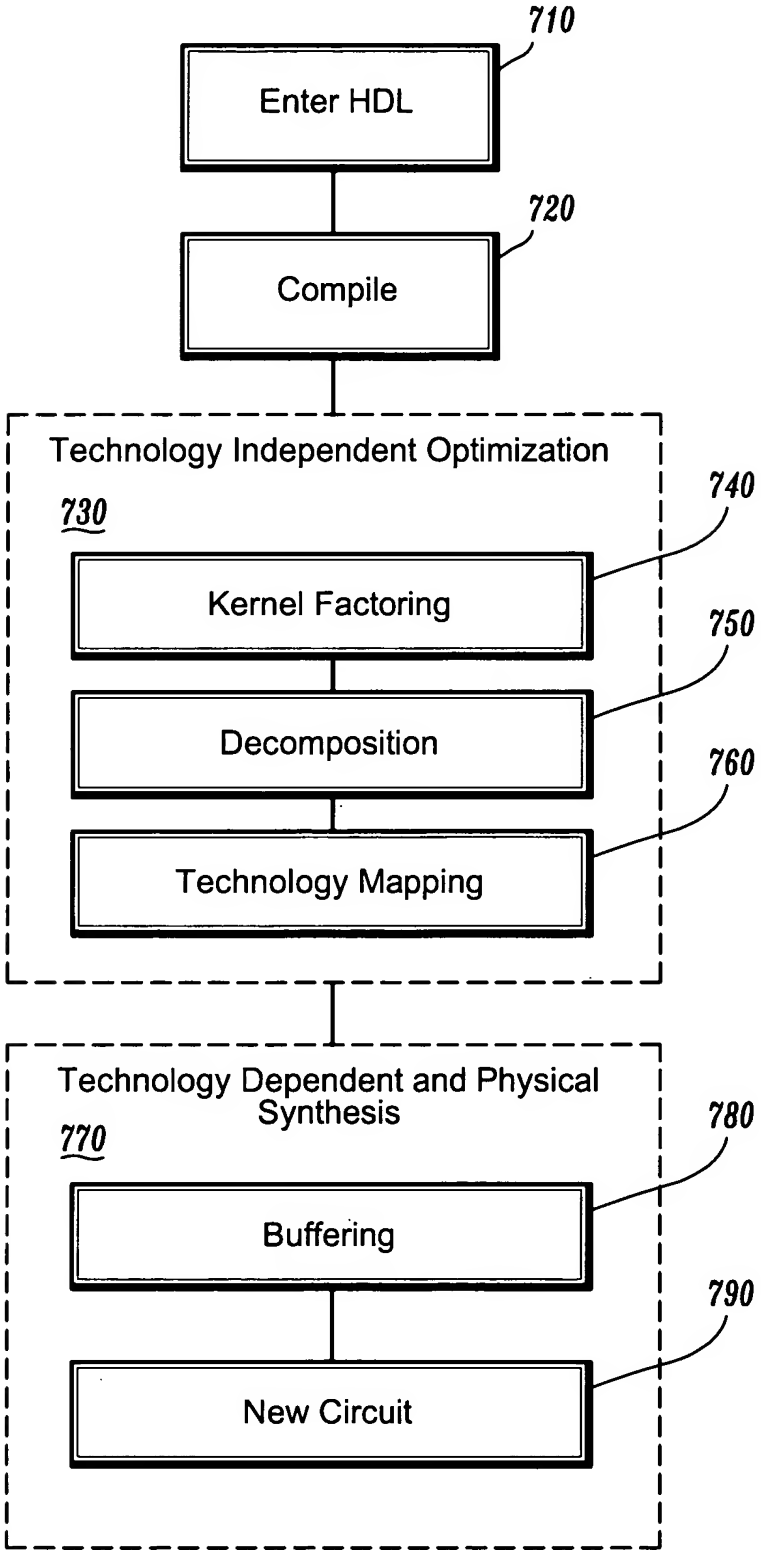
710
Enter HDL
720
Compile
Technology Independent Optimization
730
740
Kernel Factoring
750
Decomposition
760
Technology Mapping
Technology Dependent and Physical Synthesis
770
780
Buffering
790
New Circuit

FIG. 7